

Montana Cardiovascular Disease & Diabetes Prevention Program: *An Ounce of Prevention is Worth a Pound of Cure*

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With special thanks to:

Marge Samsoe and Liane Vadheim, Lifestyle Coaches

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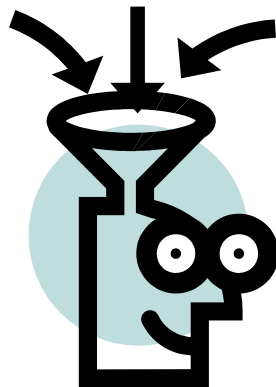
Diane Arave's, sister, Sandi Storch, who shared Janet Vaughn's presentation

Overview

- Burden of Diabetes in Montana
- A Risk Factor Related to the WIC population: Gestational Diabetes Mellitus (GDM)
- What is Montana doing to reduce the risk?
- Montana Cardiovascular Disease & Diabetes Prevention Program

Objectives

- List the goals of the 10-month, evidence-based program.
- Identify the eligibility criteria.
- Identify the National Diabetes Prevention Program locations in Montana.





The Burden of Diabetes in Montana

- Diabetes is a chronic disease with no cure.
- The prevalence of diabetes in Montana and the U.S. continues to increase.
- The prevalence of diabetes in Montana increased from 2.8% in 1990 to 8.0% in 2011.
- In 2011, it is estimated that 62,000 adult Montanans had diagnosed diabetes.
- It is estimated that 25.8 million children and adults in the U.S. (8.3% of the population) have diabetes.

Data sources: Montana Behavioral Risk Factor Surveillance System 2010-2011; NHANES 2005-2008.



The Burden of Diabetes in Montana

- Type 2 diabetes can be prevented or delayed through lifestyle changes and behavior modification among people with prediabetes.
- It is estimated that 79 million people in the U.S. have prediabetes.
- In 2010, only 5% of adult Montanans reported having pre-diabetes; however, data from clinical trials suggest that the prevalence of pre-diabetes is 35%.
- It is estimated that over 270,000 Montanans aged 18-64 years have pre-diabetes.

Data sources: Montana Behavioral Risk Factor Surveillance System 2011; NHANES 2005-2008.



Gestational Diabetes Mellitus (GDM)

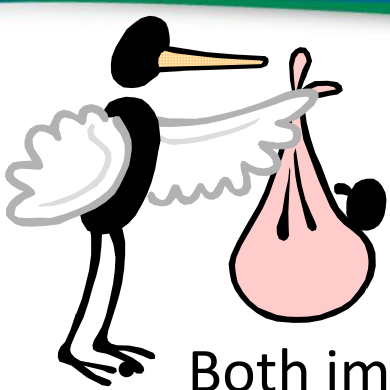
- A type of diabetes that develops only during pregnancy and usually goes away upon delivery.
- Defined as glucose intolerance identified first during pregnancy.
- GDM is managed with meal planning, dietary changes, physical activity, and, in some cases, insulin or oral diabetes medications.
- GDM increases the risk that the mother will develop type 2 diabetes and increases risks for the child.



GDM Statistics

- Accounts for 90% of all diabetes in pregnancy.
- Present in 7% of all pregnancies in U.S. (2-10%).
- 50% recurrence rate of GDM in subsequent pregnancies.
- 5% to 10% of women with GDM develop type 2 diabetes within 6 months postpartum.
- 60% risk of developing type 2 diabetes within 10 years postpartum.

Centers for Disease Control and Prevention. National diabetes fact sheet, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.



GDM Complications

Both immediate and long lasting for the fetus, child, and the mother.

- Offspring are at increased risk for
 - macrosomia (large size for gestational age)
 - Caesarean delivery
 - shoulder dystocia
 - other birth trauma
- Children of GDM pregnancies are at greater risk for
 - overweight and obesity
 - metabolic syndrome
 - diabetes
- Women with GDM are at greater risk for developing
 - hypertensive disorders
 - type 2 diabetes

Centers for Disease Control and Prevention. Maternal and Infant Health Research: Pregnancy Complications. <http://www.cdc.gov/reproductivehealth/maternalinfanthealth/PregComplications.htm>



Detection and Diagnosis of GDM

- At first prenatal visit, screening for undiagnosed type 2 diabetes in women with risk factors.
- At 24-28 weeks (earlier if risk factors present), screen for GDM with oral glucose tolerance test (OGTT).

Diagnosis of Gestational Diabetes

Time of Test	Blood Glucose Level
Fasting (before glucose test)	≥ 95 mg/dL (milligrams per deciliter)
1 hour after glucose test	≥ 180 mg/dL
2 hours after glucose test	≥ 155 mg/dL
3 hours after glucose test	≥ 140 mg/dL

\geq = greater than or equal to

From the American Diabetes Association: *Clinical Practice Recommendations 2005*



GDM Care Postpartum

- American Diabetes Association recommends that all women with GDM be screened for diabetes at 6 to 12 weeks postpartum.
- Lifelong screening for diabetes or prediabetes at least every three years.
- Take action steps to prevent type 2 diabetes by joining a lifestyle intervention program and/or taking metformin.

American Diabetes Association. Standards of Medical Care in Diabetes – 2011. *Diabetes Care* 2011; 34(s1):S11-S61.



Postpartum Screening for Diabetes

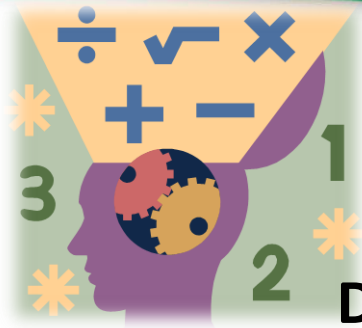
Recommendations for clinicians caring for women with GDM

- All women diagnosed with GDM should be screened for diabetes within six to 12 weeks postpartum.
- Health care providers should perform one of the following tests:
 - 75-g OGTT with plasma glucose measurement after eight hours fasting and at two hours. Diabetes is diagnosed with a two-hour glucose level ≥ 200 mg/dL.
 - Fasting blood glucose measurement after eight hours fasting. Diabetes is diagnosed with a level ≥ 126 mg/dL.
 - A1C measurement. Diabetes is diagnosed with an A1C $\geq 6.5\%$.
- A positive test result should be followed by referral to diabetes counseling and a diabetes management program, including intensive medical therapy and regular physical activity.⁷
- A negative test result should be followed by referral to a lifestyle management program to prevent diabetes. The diabetes risk for women with GDM can be managed in 80-90% of women with lifestyle therapy alone.⁴ The Montana Cardiovascular Disease and Diabetes Prevention Program (www.mtprevention.org) provides this prevention service.

GDM and Type 2 DM Risk Factors

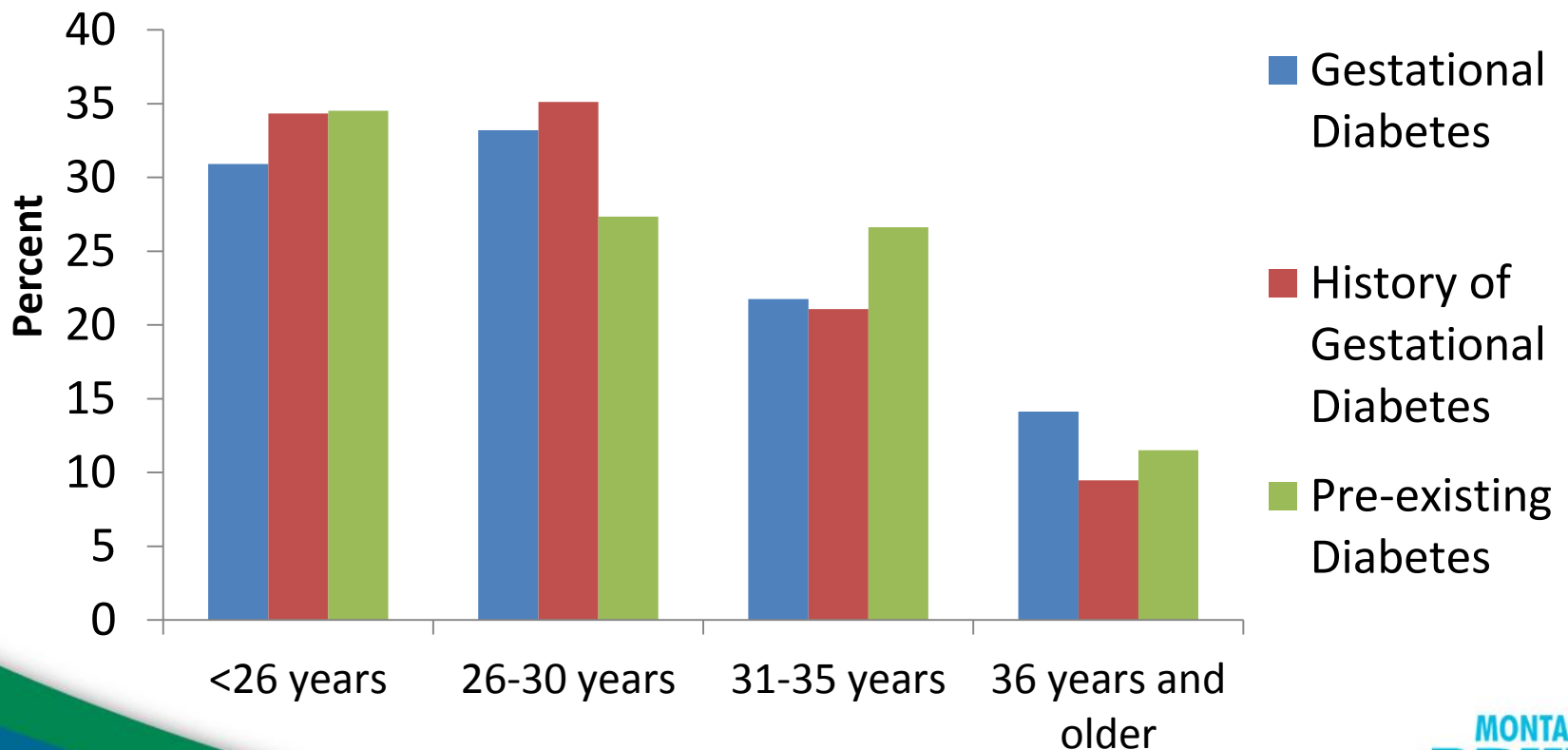
- Risk factors for developing type 2 DM after GDM pregnancy include:
 - Higher pre-pregnancy BMI
 - Greater weight gain during pregnancy
 - Higher postpartum waist circumference
 - Postpartum weight gain
 - Earlier diagnosis of GDM during pregnancy
 - Higher FBG levels and 75-gm OGTT during pregnancy





GDM Statistics

Diabetes Risk Factors by Age Group, Women Certified by WIC Program, Montana, 2010-2012

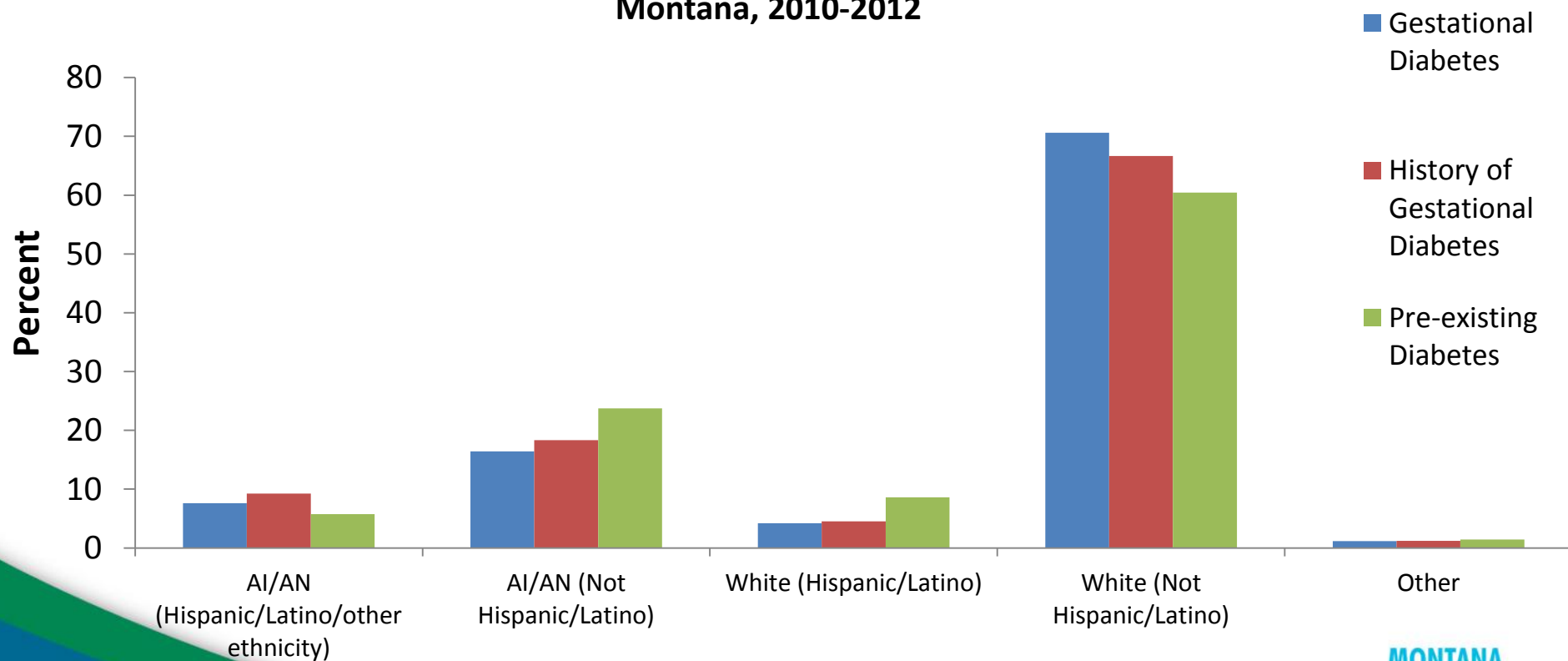


Data source: MT WIC Program



GDM Statistics

Diabetes Risk Factors by Race and Ethnicity, Women Certified by WIC Program, Montana, 2010-2012



Source: MT WIC Program



What is Montana doing to reduce the risks?

- Implementing the Montana Cardiovascular Disease and Diabetes Prevention Program
- Currently support 16 sites and up to 6 telehealth sites through funding, technical assistance, and quality improvement.

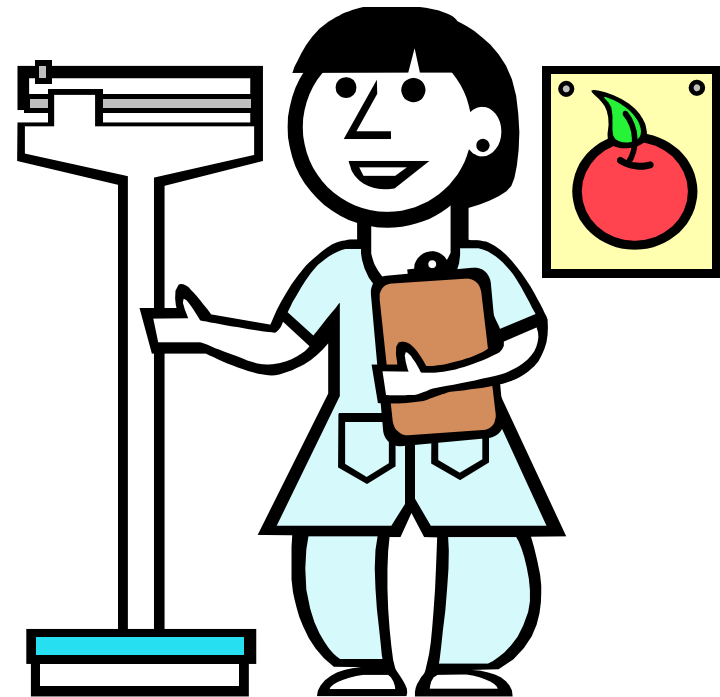


Montana Cardiovascular Disease & Diabetes Prevention Program Goal

- Prevent or delay type 2 diabetes and cardiovascular disease among Montanans who are at high risk.
 - 5% to 7% weight loss
 - Improved diet
 - Increased physical activity (>150 min/week)
 - Self-monitoring (dietary intake, PA, weight)

Lifestyle Coaches

- Dietary Component
 - Dietitian, RD, CDE
- Exercise Component
 - Exercise Physiologist
 - Exercise Specialist
 - Physical Therapist
- Other Staff
 - Nurse
 - Administrative Support
 - Psychologist
 - Social Worker





Eligibility

- Physician referral and medical clearance
- Adults (at least 18 years of age)
- Overweight or obese (BMI >25 kg/m²)
- No diagnosis of diabetes or unstable heart disease
- Not planning pregnancy within the next 6 months
- Ready to change lifestyle (diet and physical activity)



Eligibility

- One or more risk factor for developing type 2 diabetes or cardiovascular disease
 - Fasting blood sugar 101-125 mg/dL
 - A1C 5.7% - 6.4%
 - Diagnosed prediabetes, impaired fasting glucose, or impaired glucose tolerance
 - History of GDM
 - Gave birth to baby ≥ 9 pounds
 - High Blood Pressure $\geq 130/85$ mmHg or on medication
 - High Triglycerides ≥ 150 mg/dL
 - High LDL ≥ 130 mg/dL or on medication
 - Low HDL ≤ 40 mg/dL men, ≤ 50 mg/dL women

Commitment

- Attend 16 weekly education sessions on eating healthy, exercise, problem solving and coping skills.
- Keep logs of food and exercise with booklets provided.
- Track fat grams eaten, calories optional.
- Gradually increase physical activity to at least 150 min/week.
- Attend 6 monthly sessions to promote maintenance of lifestyle change and weight loss.



Core Curriculum

1. Goal Setting
2. Be a Fat Detective
3. Three Ways to Eat Less Fat
4. Healthy Eating
5. Move those Muscles
6. Being Active: A Way of life
7. Tip the Calorie Balance
8. Take Charge of What's Around You
9. Problem Solving
10. Four Keys to Healthy Eating Out
11. Take back the Negative Thoughts
12. Slippery Slope of Lifestyle Change
13. Jump Start your Activity Plan
14. Make Social Cues work for You
15. You Can Manage Stress
16. Ways to Stay motivated



Program Evaluation

Baseline

Height

Weight

Blood Pressure

Glucose/lab values

End of 16 weeks

Weight

Blood Pressure

Glucose/lab values

End of 6 months

Weight

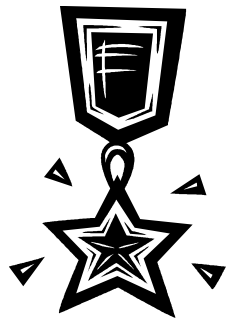
Blood Pressure

Glucose/lab values

Weekly

Participant self
monitoring

(fat, calories, physical
activity, weight)



Program Outcomes

- Over 4,000 adults enrolled since 2008
- Average weight loss per participant = 15.2 lbs
- Met 5% to 7% weight loss goal = 67%
- Met 150 min physical activity goal = 66%
- Improvements in blood glucose, blood pressure, LDL, triglycerides, total cholesterol

Average Pounds Lost by Participants by Behavior Combination

How often do you monitor your fat grams?

**Monitor Fat Grams
4 of 7 days/week or
more:**

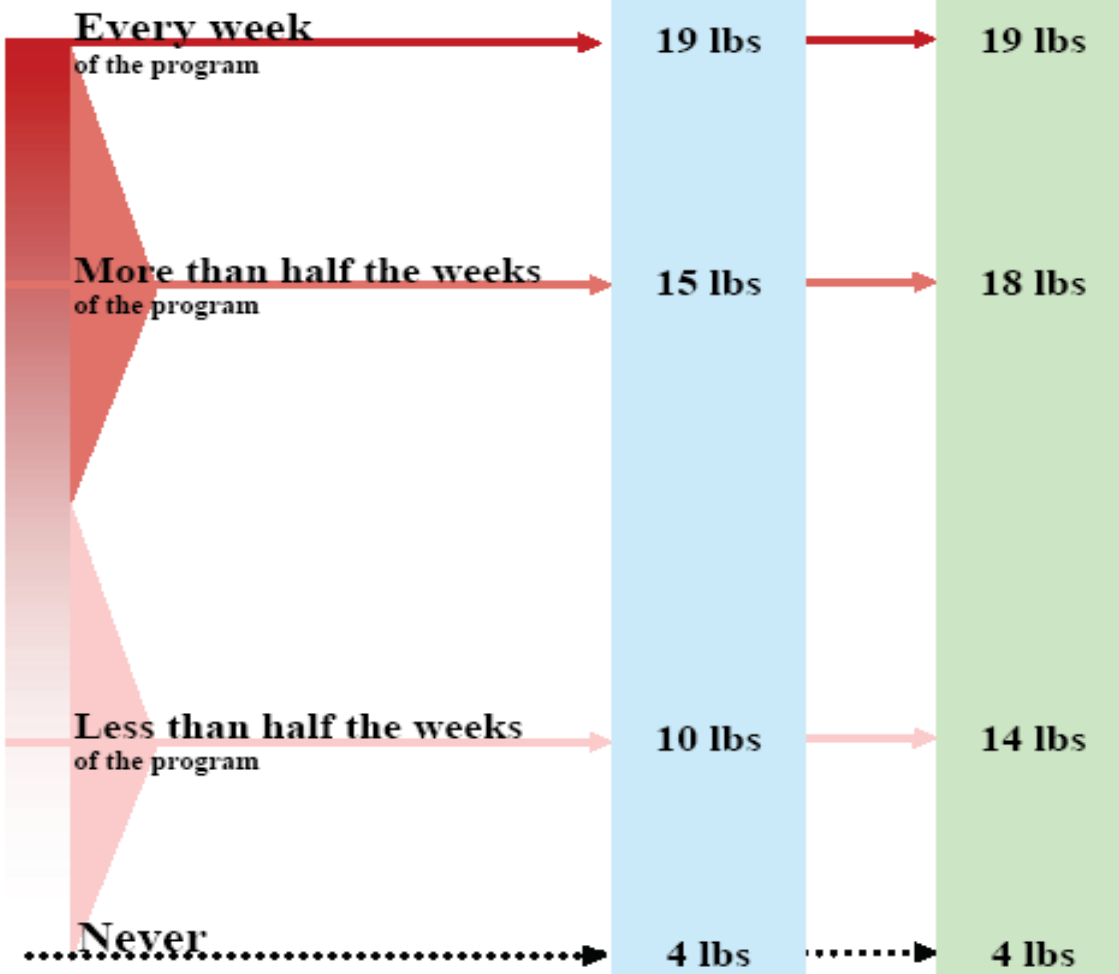
AND

How many minutes per week do you exercise?

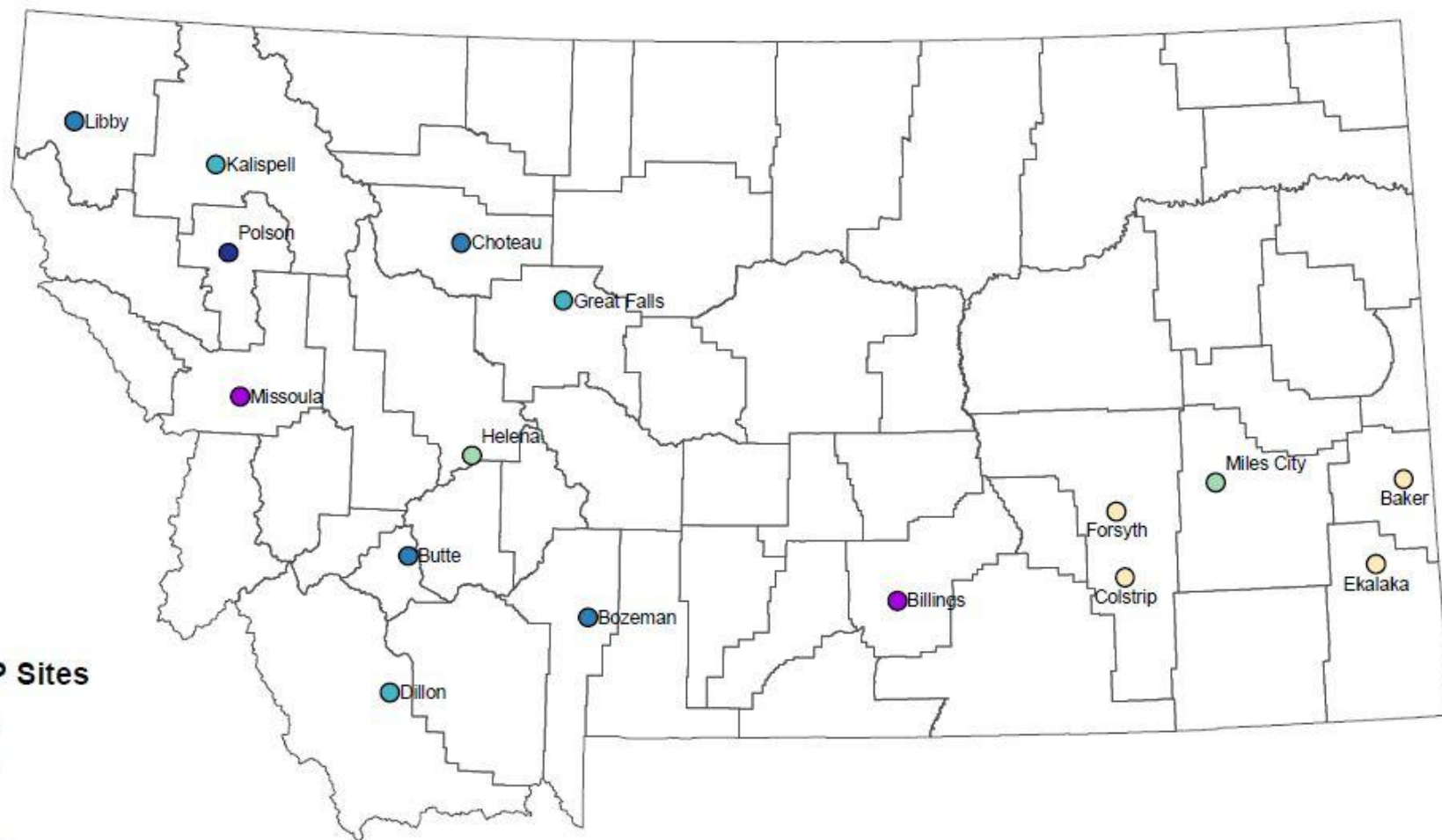
**Exercise
150 to 299
min/week**

OR

**Exercise
300 +
min/week**



Cardiovascular Disease and Diabetes Prevention Program Sites in Montana, 2012



CVD-DPP Sites

- 2008
- 2009
- 2011
- 2012
- Multiple sites
- Telehealth sites

Anaconda	Community Hospital	563-8551
Billings	Billings Clinic	238-2205
Billings	St. Vincent Healthcare	237-8599
Bozeman	Bozeman Deaconess	556-5331
Butte	Butte Diabetes Network	723-2960
Choteau	Teton Medical Center	466-6051
Dillon	Barrett Hospital and Healthcare	683-3041 or 683-3170
Great Falls	Benefis Health System	455-5516
Helena	St. Peter’s Hospital	444-2386
Kalispell	Kalispell Regional Medical	751-6707
Lewistown	Central Montana Medical Center*	535-6209
Libby	St. John’s Lutheran Hospital	283-7229
Miles City	Holy Rosary Healthcare	233-3074
Missoula	Community Medical Center	327-4326
Missoula	Missoula City/County Health Dept	258-4935
Missoula	St. Patrick Hospital	329-2602
Polson	Providence St. Joseph	883-8454
Whitefish	North Valley Hospital*	863-3500

*funded independently

Call for Action

1. Promote awareness of prediabetes among women at risk for developing type 2 diabetes.
2. Encourage participation in the Montana Cardiovascular Disease & Diabetes Prevention Program.
3. Provide referrals to the program.

It's never too early... to Prevent Diabetes

If you had gestational diabetes when you were pregnant, you and your child have a lifelong risk for getting diabetes.

Because of this risk, you need to be tested for diabetes **after your baby is born**, then at least every three years. Reduce your risk by taking small steps for you and your family. If you weigh too much, you can prevent or delay type 2 diabetes if you lose a small amount of weight and become more active.

Your children can lower their risk for type 2 diabetes if they don't become overweight. Serve them healthy foods and help them to be more active.

What is Gestational (jes-TAY-shon-al) Diabetes?

It is a type of diabetes that occurs when women are pregnant. Having it raises their risk for getting diabetes, mostly type 2, for the rest of their lives. African American, Hispanic/Latina, American Indian, and Alaska Native women have the highest risk.

**A Lifetime of Small Steps for
A Healthy Family**

National Diabetes Education Program

www.YourDiabetesInfo.org



Action Steps

FOR YOU:

1. Ask your doctor if you had gestational diabetes. If so, let your future health care providers know.
2. Get tested for diabetes 6 to 12 weeks after your baby is born, then at least every 3 years.
3. Breastfeed your baby. It may lower your child's risk of being overweight or obese. These are risk factors for type 2 diabetes.
4. Talk to your doctor if you plan to become pregnant again in the future.
5. Try to reach your pre-pregnancy weight 6 to 12 months after your baby is born. Then, if you still weigh too much, work to lose at least 5 to 7 percent (10 to 14 pounds if you weigh 200 pounds) of your body weight slowly, over time, and keep it off.
6. Make healthy food choices such as fruits and vegetables, fish, lean meats, dry beans and peas, whole grains, and low-fat or skim milk and cheese. Choose water to drink.
7. Eat smaller portions of healthy foods to help you reach and stay at a healthy weight.
8. Be active at least 30 minutes, 5 days per week to help burn calories and lose weight.



FOR THE WHOLE FAMILY:

1. Ask your child's doctor for an eating plan to help your child grow properly and stay at a healthy weight. Tell your child's doctor that you had gestational diabetes. Tell your child about his or her risk for diabetes.
2. Help your children make healthy food choices and help them to be active at least 60 minutes a day.
3. Follow a healthy lifestyle together as a family. Help family members stay at a healthy weight by making healthy food choices and moving more.
4. Limit TV, video, and computer game time to an hour or two a day.

The National Diabetes Education Program (NDEP) offers materials that can help you and your family make healthy food choices to prevent or delay type 2 diabetes. You can order a booklet for adults at risk called **Your GAME PLAN to Prevent type 2 Diabetes**, and a tip sheet for children at risk called **Lower Your Risk for type 2 Diabetes**.

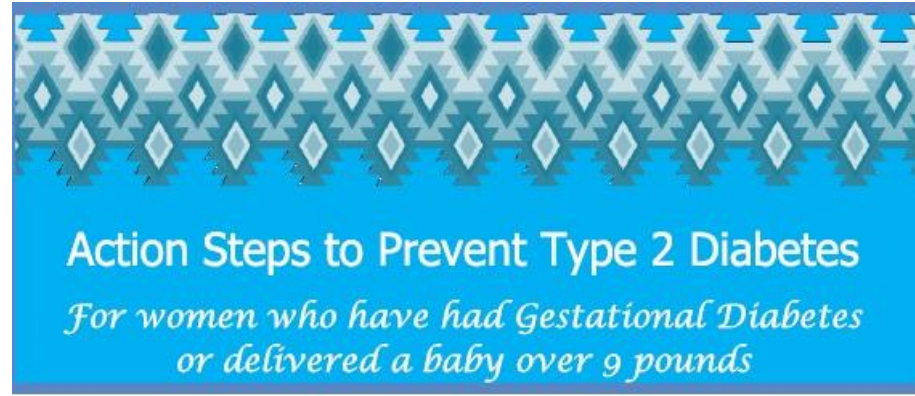
To get your free copies go to **www.YourDiabetesInfo.org** or call **1-888-693-NDEP (6337)**.



The U.S. Department of Health and Human Services' National Diabetes Education Program is jointly sponsored by the National Institutes of Health and the Centers for Disease Control and Prevention with the support of more than 200 partner organizations. Francine Kaufman, M.D., Head, Center for Diabetes, Endocrinology and Metabolism at Childrens Hospital, Los Angeles, CA, reviewed this material for accuracy.



- * **Get tested for diabetes** 6 to 12 weeks after your baby is born, then every 1 to 2 years.
- * **Tell your health care providers** that you had gestational diabetes .
- * **Talk to your doctor** if you plan to become pregnant again.
- * **Breastfeed your baby.** It may lower your child's risk for type 2 diabetes.
- * **Try to get back to your pre-pregnancy weight** 6 to 12 months after your baby is born. Then if you are still over ideal weight, work to lose at least 5 to 7% of your body weight (10-14 pounds if you weigh 200 pounds) slowly over time, and keep it off.
- * **Make healthy food choices** such as fruits and vegetables, fish, lean meats, dry beans and peas, whole grains, and low-fat or skim milk and cheese. Choose water to drink.
- * **Eat smaller portions** of healthy foods to reach and stay at a healthy weight.
- * **Be active** for at least 30 minutes, 5 days per week to burn calories and lose weight.
- * **Join a diabetes prevention program** for help achieving a healthy lifestyle. To find a program near you go to: www.mtprevention.org.



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Want more information?

- Contact: Sarah Brokaw, sbrokaw@mt.gov or (406) 444-9154
- For site locations, referral forms, medical clearance forms, published articles and more:

www.mtprevention.org

